

**Applicant:** Allen M. Ely  
**Application No.:** 10/023,582

## **INTERVIEW**

A telephone interview was held with Examiner Mackey on February 24, 2004. An Interview Summary dated February 25, 2004 was provided by Examiner Mackey. In view of the Summary provided, Applicant has not provided any further comment. If a further Summary is required, Applicant will provide this if necessary. However, Applicant has attempted to incorporate the suggestions discussed during the interview in this Reply.

The Examiner is thanked for the many courtesies extended during the interview.

## **REMARKS**

Claims 1-14 are currently pending in the Application. By the foregoing, claims 1, 7, and 9-12 have been amended and claims 13-14 have been added. Claim 2 was withdrawn from consideration as being drawn to a non-elected species. No new matter has been added and the amendments are supported by the originally filed application.

In the Action, claims 1, 3-5, and 7-12 were rejected under 35 U.S.C. § 102(b) as being anticipated by Lotz. Applicant respectfully traverses this rejection.

Lotz discloses an interleaver (10) which includes fiber optic leads (222, 224, see Figure 5) connected to photo optical sensors (226, 228, shown only diagrammatically in Figure 8) for respectively detecting the presence of opposing

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paper webs (P1, P2). The sensors (226, 228) are located to detect the presence of the webs (P1, P2) upstream of the inlets to the lower paper feed rollers (90, 92, 138, 140). See column 12, line 28. "When the optical sensor for the paper roll being fed, [paper roll 24], detects the absence of the paper from adjacent to the fiber optic lead 222, it sends a signal to the paper feed clutch 198 for the paper roll 26 [the opposing paper roll] to begin feeding paper through the paper conveying assembly 32" (column 12, line 7).

The positioning of the sensors (226, 228) only allows a determination of whether one of the paper rolls (24, 26) is empty such that the other one of the paper rolls (24, 26) may be activated to feed web (P1, P2) into the interleaver. The configuration disclosed by Lotz does not provide for an interleaver with jam detection as claimed by applicant.

Claim 1 recites an interleaver including a jam detector sensor located along at least one of the feed path from the substrate feed mechanism and the second conveyor. The jam detector sensor is adapted to detect when a substrate passes from the substrate feed mechanism onto the second conveyor. Lotz fails to disclose a jam detector sensor since the sensors (226, 228) disclosed by Lotz are not adapted to detect when a substrate passes from a substrate feed mechanism onto a second conveyor. The sensors (226, 228) are disclosed by Lotz as positioned in proximity to paper rolls (24, 26). Located as such they are not adapted to detect when a

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substrate passes from the substrate feed mechanism onto the second conveyor. Accordingly, a jam or unsuccessful substrate feed which occurs downstream of the optic leads (222, 224) would not be detected since Lotz requires the sensors (226, 228) to sense an "absence of paper" to detect an interruption and illuminate a lamp (232). See column 13, line 20. During a jam or unsuccessful feed, there would be no "absence of paper" at the sensor (226, 228).

Claim 1 further recites:

a controller, connected to the at least one jam detector sensor and to the substrate feed mechanism, which is adapted to determine an unsuccessful substrate feed by at least one of a determination of whether the jam detector sensor senses a substrate for greater than a predetermined interval and a determination of whether the jam detector sensor fails to sense a substrate for greater than a predetermined interval, such that upon a determination of an unsuccessful substrate feed, the controller turns off the substrate feed mechanism.

Also, independent method claim 7 recites "determining an unsuccessful substrate feed by at least one of determining whether the jam detector sensor senses at least one of a substrate and a blockage for greater than a predetermined interval, and determining whether the jam detector sensor fails to sense a substrate for greater than a predetermined interval". Lotz clearly fails to disclose teach or suggest a controller as set forth in claim 1 or a method including determining an unsuccessful substrate feed as set forth in claim 7.

The device disclosed by Lotz does not determine whether a jam detector

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sensor senses a substrate or blockage for greater than a predetermined interval. Further, the device disclosed by Lotz does not determine whether a jam detector sensor fails to sense a substrate for greater than a predetermined interval. As explained above, Lotz discloses an optical sensor which merely detects an "absence of paper from adjacent to [a] fiber optic lead 222" (column 12, line 7). Such a device would be wholly ineffective to detect a jam, since when sensing individually separated paper sheets, the absence of paper in and of itself does not necessarily indicate a paper jam. Since the optical sensors (226, 228, See optical leads 222 and 224 in Figure 5) disclosed by Lotz are positioned upstream from knife and anvil drums (100, 102) which cut the paper web (P1, P2), the sensors (226, 228) would always sense a continuous piece of unbroken web (P1, P2) unless one of the paper rolls (24, 26) ran out of paper. Therefore, a determination of whether a substrate is detected or not for greater than a predetermined interval is not at all applicable, because there are no individually separated substrates to detect.

Lotz fails to suggest or disclose a controller adapted to determine an unsuccessful substrate feed or determining an unsuccessful substrate feed, as recited in claims 1 and 7. It also does not suggest or disclose a controller which turns off a substrate feed mechanism upon determination of an unsuccessful substrate feed as recited in claim 1, or, turning off a substrate feed mechanism in the event that an unsuccessful substrate feed is determined as recited in claim 7.

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Accordingly, claims 1 and 7 are patentable over Lotz. Claims 3-6 and 8-12 depend from one of claims 1 and 7, and are therefore also patentable over Lotz for the same reasons as noted above in connection with claims 1 and 7. Accordingly, withdrawal of the Section 102 rejection of claims 1, 3-5, and 7-12 is respectfully requested.

Claim 6 was rejected under 35 U.S.C 103(a) as unpatentable over Lotz in view of U.S. Patent No. 5,079,901 (Kotsiopoulos). Applicant respectfully traverses this rejection.

Claim 6 depends from claim 1 and recites the perforation and acceleration rolls and the jam detector position. This is clearly absent from Lotz, and Kotsiopoulos does not address the deficiencies in Lotz.

Kotsiopoulos discloses a coupon inserting apparatus (5) including feed rolls (36, 38) and positioning rolls (48, 50) which convey a continuous web of transversely perforated coupons (46) there through. A coupon sensor (62) is positioned between the feed rolls (36, 38) and the positioning rolls (48, 50) to provide a controller (70) with sensed coupon location information.

Kotsiopoulos fails to suggest or disclose a controller adapted to determine an unsuccessful substrate feed by at least one of a determination of whether the jam detector sensor senses a substrate for greater than a predetermined interval and a determination of whether the jam detector sensor fails to sense a substrate for greater than a predetermined interval, as recited in claim 1. Kotsiopoulos only

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discloses that the controller 70 receives information from the coupon sensor (62) related to the presence and absence of a coupon. See Column 6, line 7. Additionally, Kotsiopoulos also fails to suggest or disclose determining an unsuccessful substrate feed by at least one of determining whether the jam detector sensor senses at least one of a substrate and a blockage for greater than a predetermined interval, and determining whether the jam detector sensor fails to sense a substrate for greater than a predetermined interval, as recited in method claim 7.

Applicant respectfully submits that claim 6, which depends from claim 1, is patentable over the combination of Lotz and Kotsiopoulos. Accordingly, Applicant respectfully requests withdrawal of the Section 103 rejection of claim 6.

Claim 9, and claim 10 which depends from claim 9, are additionally patentable over the cited references since none of the cited references disclose sounding an alarm when an unsuccessful substrate feed is detected. Claim 10 is additionally patentable over the cited references because the cited references fail to disclose clearing a jam.

Under *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), the determination of obviousness requires "(A) Determining the scope and contents of the prior art; (B) Ascertaining the differences between the prior art and the claims in issue; (C) Resolving the level of ordinary skill in the pertinent art; and (D)

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*Evaluating evidence of secondary considerations.” MPEP Rev 1, Feb. 2003, 2141, pg. 2100-115.* Secondary evidence such as commercial success, long felt need, and failure of others must be considered in every case in which presented. *Id.*

Enclosed is the signed declaration of Richard Woodford submitted under 37 CFR § 1.132. Mr. Woodford, Corporate Engineering Manager of Iowa Turkey Growers Cooperative, has significant experience in automated food preparation and handling systems. According to the declaration, prior to the “PPI Jam Detection System” which is the subject of the present application, paper jammed in feed rollers of an interleaver would result in a considerable waste of time and product. Mr. Woodford observed that after installing the Jam Detection System in accordance with this invention at his facility, lost production and downtime was almost completely eliminated. Mr. Woodford further states that he was not aware of any prior system for jam detection of substrates fed by an interleaver prior to Applicant’s Jam Detection System being installed at his facility.

According to *Graham*, evidence to rebut a case of obviousness “may include evidence of ‘secondary’ considerations’, such as ‘commercial success, long felt but unsolved needs, [and] failure of others”’. *Id.* at pg 2100-147 citing *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966). Further, such evidence may also include evidence of unexpected improved properties or properties not present in the prior

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art. *Id.* citing *Dillon*, 919 F.2d at 692-93, 16 USPQ2d at 1901 (Fed. Cir. 1990), cert. denied, 500 U.S. 904 (1991).

From the declaration, it is clear that a long felt need existed in the food preparation and handling art to eliminate downtime and wasted product resulting from interleaver substrate paper jams. Also, it is clear that by virtue of its achievement in successfully reducing operation costs, the claimed invention has become commercially successful and well received by those skilled in the art. In view of the significant costs associated with eliminating substrate paper jams and the fact that previously no system for preventing such jams existed, it is clear that others have failed to provide a solution to the problem. Further, by this invention, an interleaver is provided having useful properties not present in the prior art. Accordingly, Applicant respectfully submits that the Woodford declaration must be considered as evidence of non-obviousness of the claimed invention. Therefore, Applicant respectfully reiterates the request for withdrawal of the Section 103 rejection.

New dependent claim 13 and independent claim 14 have been presented. Claim 13 further defines the method of detecting a jam of claim 7, and claim 14 further defines an interleaver having a jam detector according to an embodiment of the invention.

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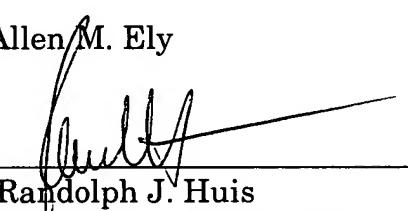
In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and submits that the present application, including claims 1 and 3-14, is in condition for allowance.

If the Examiner believes that an interview, either telephonically or in person, would advance prosecution of the application, the Examiner is respectfully requested to contact the undersigned to arrange an interview.

Respectfully submitted,

Allen M. Ely

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Enclosure